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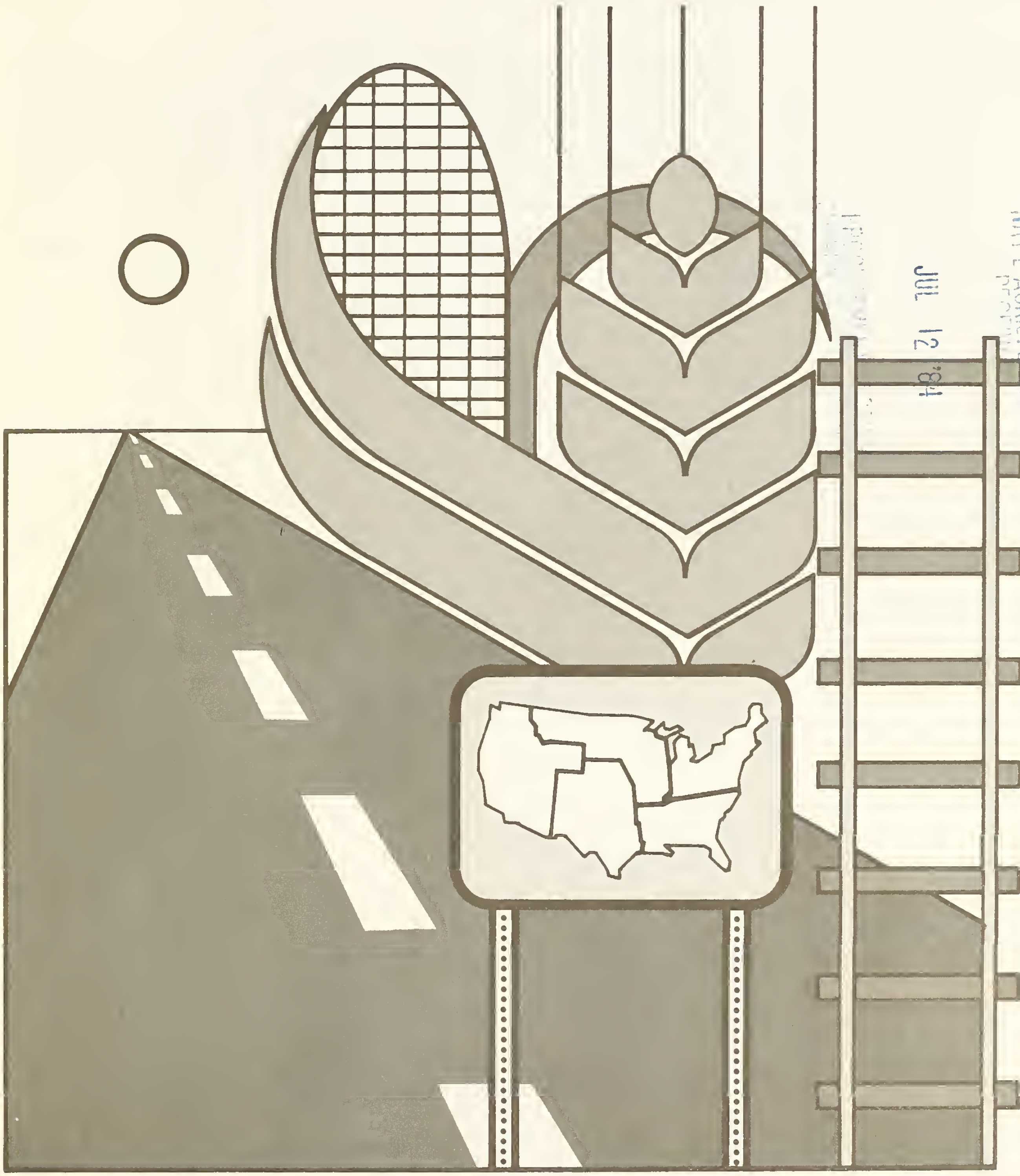
Marketing and Transportation of Grain By Local Cooperatives



Marketing and Transportation of Grain by Local Cooperatives

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Abstract

A total of 2,339 local cooperative associations handled 4.6 billion bushels of grain during the 1979-80 marketing year. This amounts to around 40 percent of total off-farm grain sales. Their grain storage capacity totaled 2.3 billion bushels. Corn, at 1.8 billion bushels, ranked as the leading grain handled; wheat second at 1.1 billion bushels. More than half the grain sold by local cooperatives moved by truck.

Key Words: Cooperatives, local, grain handling, grain elevator, rail car, truck, storage, grain bank.

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Highlights

Local grain-handling cooperative associations sold an average of 2 million bushels of grain per association in 1979/80. That amount included grain handled through the grain bank and the Commodity Credit Corporation (CCC).

Grain volume marketed averaged 1.1 million bushels per location. Many cooperatives operated more than one branch or location.

Storage capacity per cooperative association averaged about 998,000 bushels. Taking the number of locations into account (1.7 locations per association), the average capacity per location was 574,000 bushels.

More than 89 percent of grain-handling cooperatives were licensed by State or Federal agencies. Most had State licenses but about 12 percent had both State and Federal licenses.

More than 65 percent of the grain volume handled by cooperatives was corn and wheat. Another 29 percent included grain sorghum, soybeans, oats, and barley. The remainder was made up of 13 other grains.

The average annual turnover rate (ratio of grain volume to storage capacity) was 2.0. Some 2 percent was marketed under the CCC program and 2 percent was handled through a grain bank. Wheat and corn accounted for virtually all of the CCC program volume. Corn made up 73 percent of the grain bank volume, while wheat and grain sorghum amounted to about 21 percent.

Excluding grain handled through the grain bank and CCC programs, 9 percent was sold locally, 60 percent was sold to other cooperatives, and 31 percent was sold to other grain dealers.

Cooperatives transported more than 53 percent of the grain by truck, 43 percent went by rail, and 4 percent went by barge or other conveyance. About 87 percent of cooperative storage capacity was on a rail line. Single car shipments of grain accounted for about 41 percent of all grain shipped by rail. Units of 2- to 24-car size accounted for about 29 percent of total rail movement.

Abandonment of rail service at country elevator locations is a serious and continuing problem. Nearly 10 percent of the cooperatively owned elevator storage capacity was on rail lines scheduled for abandonment.

Of those cooperatives reporting problems, interest cost was cited most often, followed by transportation and rail-related problems. These varied widely among the regions of the country.

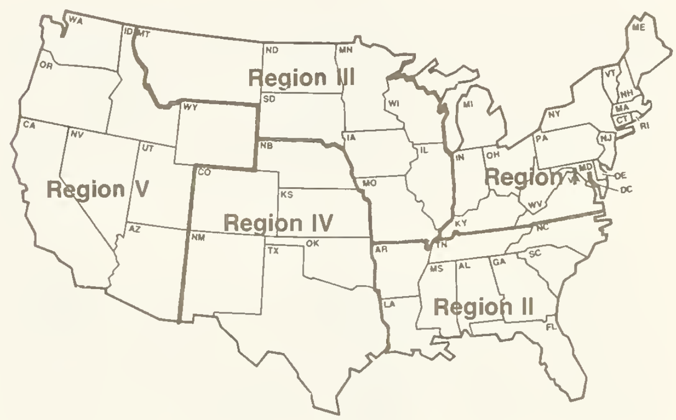
Marketing and Transportation of Grain By Local Cooperatives

Francis P. Yager and Charles Hunley
Agricultural Economists

The United States annually produces about half the world's grain. Marketing this huge crop requires an extensive and flexible storage and transportation system. Harvesting of these grains during short seasonal periods, generates a substantial need for storage in the production area and for orderly marketing throughout the year. Cooperatives are major assemblers and storers of grain in the Nation.

This study addresses only first-handler grain statistics for the cooperatives' fiscal years that ended in 1980. The statistics are expanded data based on a sample survey. Therefore, these estimates may differ somewhat from the figures that would have resulted from a complete enumeration. The term cooperative used here refers to the local associations that handled grain and the first-handler activity of regional associations that operate line elevators. The United States was divided into five regions for this study (fig. 1).

Figure 1—Designated reporting regions



PROFILE OF LOCAL GRAIN-HANDLING COOPERATIVES

Coopèratives handled a diversity of grains, usually dictated by the different grains marketed by member-patrons. Across the country, cooperatives handled a total of 19 different grains.

Membership of Local Cooperatives

The 2,339 cooperatives handling grain had a total membership of 2.5 million, an average of 1,080 members per cooperative. Due to the many large associations in regions I and II, they showed the largest average memberships with 2,316 and 3,824, respectively. Memberships averaged significantly smaller in regions III, IV, and V. Grain producers accounted for about 59 percent of the memberships in all the associations, but varied from less than 50 percent in regions I and II to more than 80 percent in region V (table 1).

Table 1—Membership of local grain-handling cooperative associations, by region, 1979-80

Region	Total associations	Members: Grain producers	Members: All others	Members: Total
	Number			
I	291	320,691	353,380	674,071
II	81	122,906	186,813	309,719
III	1,225	657,979	353,851	1,011,830
IV	661	346,764	141,463	488,227
V	81	33,431	8,090	41,521
All regions	2,339	1,481,771	1,043,597	2,525,368

Licensed Local Grain Storage Capacity

About 89 percent of the cooperatives that operated storage capacity were licensed to operate grain marketing or storage operations. Of those with licensed capacity, 64 percent had only a State license, 24 percent had only a Federal license, and 12 percent had both (table 2).

Licensed warehouses were 96 percent of the total in region IV and 91 percent in region III. Region II was dramatically different, where only 56 percent of the warehouses were licensed.

Table 2—Cooperative associations with licensed grain storage warehouses, by type of license, by region, 1979-80

Region	Cooperative associations with licensed grain storage warehouse	Type of license: Federal	Type of license: State	Type of license: Federal and State	Type of license: with no license
	Number				
I	216	21	135	60	75
II	45	5	28	12	36
III	1,115	279	680	156	110
IV	636	158	455	23	25
V	67	34	31	2	14
All regions	2,079	497	1,329	253	260

Type of Storage Capacity

The upright elevator, a grain storage facility with greater

height than width, was by far the most popular. Loadout by gravity flow is the principal advantage of this type and nationally accounts for 81 percent of local cooperatives' elevator storage. Region I at 94 percent had the highest proportion while the other four ranged from 72 to 83 percent (table 3).

Flat-storage has gained in popularity in recent years. This type results in higher costs for filling and emptying, but offers flexibility in that other products can be stored when not needed for grain. Most elevators will have a combination of upright- and flat-storage. From 17 to 28 percent of the storage capacity in regions II through V was flat-storage, while only 6 percent in region I elevators were flat-storage.

Storage Capacity

Local grain-handling cooperatives had an estimated 2.3 billion bushels of storage capacity in 1979-80 (table 3). This represented about 32 percent of total off-farm capacity. By cooperative, capacity averaged about 998,000 bushels, but varied significantly among regions (table 4).

Associations in regions II and V had the largest average storage capacity, with 2,678,228 bushels and 2,451,416 bushels, repectively. Region IV associations averaged slightly more than 1 million bushels while those in regions I and III averaged about 677,000 and 797,000 bushels (table 4).

Average storage capacity per elevator location ranged from 355,000 bushels in region I to 812,000 in region II. The average for all locations was 574,000 bushels. As shown in table 4, associations in region II had an average of 3.3 locations per association. Region V had 3.7, region I 1.9, region III 1.6, and region IV 1.5.

A high-storage utilization rate is essential to maintaining a profitable business, with marketing needs dictating the utilization rate. A low turnover rate (ratio of grain volume handled to storage capacity) necessitates a higher margin per bushel to cover the cost of operations. Nationally, cooperative elevators had an annual turnover rate of 2.0 in 1979 and 1980. This ratio varies widely on a regional basis. Region I had the highest annual turnover rate at 2.9, while region IV had the lowest at 1.3 (table 5).

GRAIN VOLUME MARKETED

The 2,339 local cooperative associations handling grain marketed 4.6 billion bushels during the 1979-80 crop year. This included grains handled through grain banks and the Commodity Credit Corporation (CCC). The volume of grain handled by an individual association ranged from 1.5 million bushels in region IV to 4.5 million bushels in region II, and averaged 1.9 million bushels (table 5).

Table 3—Local cooperative association storage capacity by type of storage, by region, 1979-80

Region	Total storage	Upright	Flat
	Bushels	*Percent*	
I	196,926,081	94	6
II	216,936,452	72	28
III	976,428,849	83	17
IV	745,886,494	80	20
V	198,564,730	76	24
All regions	2,334,742,606	81 (avg.)	19 (avg.)

Table 4—Number of local associations and average number of locations for each and storage capacity, by region, 1979-80

Region	Association	Average location per association	Average storage capacity per association	Average storage capacity per location
	Number		*Bushels*	
I	291	1.9	676,722	354,822
II	81	3.3	2,678,228	812,996
III	1,225	1.6	797,085	511,755
IV	661	1.5	1,128,421	729,830
V	81	3.7	2,451,416	622,460
All regions	2,339	1.7	998,180	573,505

Table 5—Total and average grain volume handled per association, per location, and turnover rate, by region, 1979-80

Region	Grain volume handled: Total	Grain volume handled: average per association	Grain volume handled: average per location	Turnover
	Bushels			*Ratio*
I	576,998,812	1,982,812	1,039,637	2.9
II	367,647,407	4,538,856	1,376,957	1.7
III	2,369,341,180	1,934,156	1,241,793	2.4
IV	995,881,848	1,506,523	974,375	1.3
V	268,282,014	3,312,123	841,009	1.4
Total	4,578,080,750	1,957,281	1,124,559	2.0

Average annual turnover rate for all associations was 2.0. In three of the five regions, the turnover rate was below 2. To the extent turnover rate is a measure of efficiency, then cooperative associations in those regions that have a low turnover rate need to reexamine their grain-handling operations.

Collectively, local cooperative associations handled about 40 percent of the off-farm sales of the 1979-80 crop grain in the United States. On a crop basis, local cooperatives handled about 58 percent of the off-farm sales of rice, 65 percent of the flaxseed, and 61 percent of the barley. Corn was the largest volume crop handled, amounting to 1.9 billion bushels, or 38 percent of total off-farm corn sales. Wheat was second with about 1.1 billion bushels, 54 percent of total off-farm wheat sales.

Corn accounted for 41 percent of the total grain volume handled by local cooperatives (table 6). Wheat was second, with 24 percent of the total, followed by soybeans with 17 percent. Sixteen other types of grains were handled in lesser volumes. Grain bank and CCC programs each accounted for nearly 2-1/2 percent of total volume handled (table 7).

Local cooperatives in region III originated about 52 percent of the grain volume handled by local cooperatives (table 8). Corn volume in region III represented 66 percent of all corn handled by local cooperatives (table 8 and appendix table 1). Local cooperatives in regions III and IV each accounted for about 39 percent of the total volume of wheat handled.

CCC program activity was fairly light during the 1979-80 marketing year, and represented only 2 percent of the grain volume handled by local cooperatives (table 7). Wheat and corn made up about 95 percent of the total amount of CCC grain handled (table 9). Regions III and IV handled 91 percent of CCC grain (table 10).

Grain bank grain accounted for about 2 percent of the total volume handled by local cooperative elevators (table 9). Corn accounted for 73 percent of the grain bank volume handled, followed by sorghum with about 11 percent. Wheat, oats, and barley made up the balance (table 9).

Disposition of Grain Sales

A primary purpose of the local grain-handling cooperative associations is to act as assemblers of grain. Of the grain volume marketed by these local cooperatives, 60 percent was sold to other cooperatives (table 11 and appendix tables 2 and 3). Most of this was to cooperatively owned terminals, subterminals, or processing plants. Minor amounts may have been sold to other local cooperatives to meet their specific needs. Thirty-one percent was sold to noncooperative firms, while 9 percent was sold locally or to truckers.

Table 6—Type and volume of grain handled by cooperatives, 1979-80

Type	Total volume [1]	Distribution of volume
	Bushels	*Percent*
Corn	1,888,514,399	41
Wheat	1,107,651,773	24
Soybeans	758,516,399	17
Grain sorghum	226,166,433	5
Oats	124,465,478	3
Barley	166,048,618	4
Rye	7,268,940	(2)
Flax	7,478,227	(2)
Rice	199,341,749	4
Dry beans	9,753,508	(2)
Dry peas	3,605,172	(2)
Sunflower	76,407,429	2
Buckwheat	152,802	(2)
Millet	2,027,102	(2)
Mustard	3,178	(2)
Rape	14,227	(2)
Triticale	135,839	(2)
Safflower	133,234	(2)
Lentil	396,243	(2)
Total	4,578,080,750	100

[1] Includes grain handled through grain bank and CCC.
[2] Less than 0.5 percent.

Table 7—Specified volumes of grain handled by local cooperative associations, by type of grain, 1979-80

Type	Regular market[1]	Grain bank	CCC
		Bushels	
Corn	1,742,072,692	83,696,562	62,745,145
Wheat	1,053,214,233	10,963,515	43,474,025
Soybeans	754,591,657	0	3,924,742
Grain Sorghum	211,637,290	12,835,642	1,693,501
Oats	116,684,534	7,472,243	308,701
Barley	165,650,714	356,881	41,023
Rye	7,268,940	0	0
Flax	7,478,227	0	0
Rice	199,341,749	0	0
Dry Beans	9,753,508	0	0
Dry Peas	3,605,172	0	0
Sunflower	76,407,429	0	0
Buckwheat	152,802	0	0
Millet	2,027,102	0	0
Mustard	3,178	0	0
Rape	14,227	0	0
Triticale	135,839	0	0
Safflower	133,234	0	0
Lentil	396,243	0	0
Total	4,350,568,770	115,324,843	112,187,137

[1] Includes local sales to cooperatives and other grain dealers.

Table 8—Regional distribution of the grain volume handled by local cooperative associations, by region, 1979-80 [1]

Region	Corn	Wheat	Soybeans	Grain sorghum	Oats	Barley	Rye	Flax	Dry beans	Dry peas	Sunflower	Buckwheat	Millet	Mustard	Rape	Triticale	Safflower	Lentil	Total all grain
	Percent																		
I	19	6	18	(2)	10	2	(2)	0	69	0	0	22	0	0	0	0	0	0	12
II	2	2	31	1	2	(2)	0	0	0	0	0	0	0	0	0	0	0	0	8
III	66	38	47	9	82	75	100	100	0	0	100	78	74	100	39	99	0	0	52
IV	13	39	4	90	5	1	(2)	0	8	0	(2)	0	26	0	0	0	0	0	22
V	(2)	15	0	(2)	1	22	0	0	23	100	(2)	0	0	0	61	1	100	100	6
All regions	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

[1]See appendix table 1 for breakdown of kinds of grains handled within each region.

[2]Less than 0.5 percent.

Table 9—Types of grain bank and CCC grain handled by local cooperative associations, 1979-80

Type	Grain bank grain: Volume	Grain bank grain: Distribution of volume	CCC grain: Volume	CCC grain: Distribution of volume
	Bushels	Percent	Bushels	Percent
Corn	83,696,562	73	62,745,145	56
Wheat	10,963,515	10	43,474,025	39
Soybeans	0		3,924,742	3
Grain sorghum	12,835,642	11	1,693,501	2
Oats	7,472,243	6	308,701	(1)
Barley	356,881	(1)	41,023	(1)
Total	115,324,843	100	112,187,137	100

[1]Less than 0.5 percent.

Table 10—Grain bank and CCC grain handled by local cooperative associations, by region, 1979-80

Region	Grain bank grain: Volume	Grain bank grain: Distribution of volume	CCC grain: Volume	CCC grain: Distribution of volume
	Bushels	Percent	Bushels	Percent
I	32,821,164	29	4,967,734	4
II	0	0	190,000	(1)
III	56,748,860	49	73,010,054	65
IV	25,399,263	22	28,832,814	26
V	355,556	(1)	5,186,535	5
All regions	115,324,843	100	112,187,137	100

[1]Less than 0.5 percent.

Table 11—Distribution by market outlet of grain sold by local cooperative associations, by region, 1979-80

Region	Grain sold: Locally	To cooperatives	To noncooperatives	Total
	Percent			
I	6	55	39	100
II	2	82	16	100
III	10	56	34	100
IV	14	66	20	100
V	2	50	48	100
All regions	9	60	31	100

Table 12—Distribution by market outlet of grain sold by local cooperative associations, by type of grain, 1979-80

Type	Grain Sold		
	Locally	To cooperatives	To non-cooperatives
	Percent		
Corn	61	34	46
Wheat	6	27	23
Soybean	1	20	17
Grain sorghum	14	4	4
Oats	14	2	2
Barley	3	4	4
Rye	1	([1])	([1])
Flax	([1])	([1])	([1])
Rice	0	7	1
Dry beans	([1])	([1])	1
Dry peas	([1])	([1])	([1])
Sunflower	([1])	2	2
Buckwheat	([1])	([1])	([1])
Millet	([1])	([1])	([1])
Mustard	0	([1])	([1])
Rape	0	([1])	([1])
Triticale	0	([1])	([1])
Safflower	0	0	([1])
Lentils	0	([1])	([1])
Total	100	100	100

[1]Less than 0.5 percent.

Table 13—Distribution by transport mode of grain sold by local cooperative associations, by type of grain, 1979-80

Type	Mode of transportation		
	Truck	Rail	Other
	Percent		
Corn	57	43	([1])
Wheat	37	57	6
Soybean	66	28	6
Grain sorghum	68	32	([1])
Oats	70	30	([1])
Barley	32	66	2
Rye	71	29	([1])
Flax	89	11	0
Rice	45	31	24
Dry beans	50	50	0
Dry peas	84	10	6
Sunflower	73	27	0
Buckwheat	100	0	0
Millett	73	27	0
Mustard	100	0	0
Rape	100	0	0
Triticale	82	18	0
Safflower	5	95	0
Lentils	100	0	0
All grains	53	43	4

[1]Less than 0.5 percent.

Local cooperatives sold at least 50 percent of their volume through cooperative channels in each region. Locals in region II marketed 82 percent of their grain within cooperative channels, while locals in region V sold 48 percent of their grain to noncooperatives (table 11).

Corn, wheat, and soybeans made up 81 percent of the total sales to cooperatives while the same grains made up 86 percent of sales to noncooperatives (table 12).

Mode of Grain Transportation

Historically, railroads have moved grain from country elevators to terminals or to processors. The recent abandonment of many rail lines has eliminated this shipping alternative for a substantial number of country elevators. Furthermore, the recent deregulation of freight rates has allowed individual rate structures to be established that, in many instances, are dependent upon volume.

In 1979 and 1980, local cooperative elevators in the United States utilized trucks to transport 53 percent of their grain sold (table 13 and appendix table 5). Since about 9 percent was sold locally or to private truckers (table 11), about 44 percent of movement by truck was to terminals or processors. Truck use was heaviest in region I, accounting for 74 percent of the grain volume sold (table 14). By constrast, only 21 percent of the grain sold in region V was shipped by truck.

Railroads were used by local elevators to ship about 43 percent of total grain sold (table 14). Region II was the largest user in terms of percentages, while region III shipped the largest volume. Corn volume was the highest among grains shipped by rail by local cooperatives, at 745 million bushels. About 613 million bushels of wheat, or 57 percent, were shipped by this mode (table 13).

Barge and other minor shipment modes accounted for about 4 percent of total grain shipments by local cooperatives (table 14).

Size of Rail Shipments

Rail shipment size has changed considerably during the past 10 years. However, comparative data for previous periods are not available. For the 1979-80 marketing year, single car shipments by local cooperatives was the predominant method, accounting for 41 percent of total rail volume shipped. Single car use varied widely by region, ranging from 9 percent in region I, to 74 percent in region II (table 15 and appendix table 6). Units of 2 to 24 cars hauled 29 percent of the volume, units of 25 to 49 cars moved 11 percent, and larger units handled 19 percent (table 15).

The variation among the types of grain was even greater within each shipment size. Only 9 percent of the corn, but 83

percent of the barley, sold was shipped in single-car units (table 16). The largest corn volume, about 23 percent, moved in 25- to 49-car shipments. The major portion of the wheat shipped, about 57 percent, was moved in single-car units and about 32 percent in 2- to 24-car units. Soybean shipments were characterized as single-car, which accounted for 41 percent of their rail volume.

Rail Abandonment

Although the storage capacity was relatively low on railroads scheduled for abandonment in 1979 and 1980, cooperatives on those lines felt a catastrophic impact upon their operations. Some rail lines showed a high percentage of abandonment, such as the Rock Island, which has since ceased operations. (Many of the rail lines scheduled for total abandonment have been taken over by existing or new companies since the data for this report were collected.) The largest volume of storage capacity to be affected by abandonment was 108.5 million bushels in region III (table 17). This was 14 percent of the region's total storage capacity on rail lines and 56 percent of the total rail lines' storage capacity associated with lines scheduled for abandonment.

Cooperatives had storage facilities on 89 different rail lines or combinations of rail lines. The largest amount was nearly 359 million bushels on the Burlington Northern. This represents about 10 percent of total cooperative storage space on rail lines. The Chicago Northwestern was second with slightly more than 268 million bushels. Three other lines each serviced around 155 million bushels of storage (table 18).

At the time of this survey, about 41.5 million bushels of storage was on the Rock Island Railroad, 86 percent of which was on trackage scheduled for abandonment—32 percent in region III and 54 percent in region IV. About 50 percent of the cooperative storage space on the Chicago, Rock Island, & Pacific was on trackage scheduled for abandonment (table 18).

Table 14—Distribution by transport mode of grain sold by local cooperative associations, by region, 1979-80

Region	Mode of transportation			
	Truck	Rail	Other	Total
	Percent			
I	74	24	2	100
II	34	53	13	100
III	56	44	(1)	100
IV	52	48	0	100
V	21	39	40	100
All regions	53	43	4	100

[1]Less than 0.5 percent.

Table 16—Percentage distribution of the volumes of selected major grains shipped by rail by local cooperative associations, by size of rail shipment, 1979-80

Car shipment size	Type of grain					
	Corn	Wheat	Soybeans	Grain sorghum	Oats	Barley
	Percent					
Single	9	57	41	35	70	83
2-24	20	32	18	43	24	17
25-49	23	8	11	18	5	(1)
50-74	17	3	6	4	2	(1)
75-99	22	(1)	20	0	(1)	0
Over 100	9	(1)	4	0	0	0

[1]Less than 0.5 percent.

Table 15—Percentage distribution of rail shipments by local cooperative associations, by size of shipment, by region, 1979-80

Region	Cooperatives	Volume	Car Shipment size					
			Single	2-24	25-29	50-74	75-79	100 plus
	Number	*Bushels*	*Percent*					
I	128	131,444,571	9	55	0	12	3	21
II	22	196,731,096	74	26	(1)	0	0	0
III	794	989,693,566	39	22	13	7	14	5
IV	506	447,004,757	31	40	17	12	(1)	(1)
V	73	102,033,968	73	23	4	(1)	0	0
All regions	1,523	1,866,907,958	41	29	11	7	8	4

[1]Less than 0.5 percent.

Table 17—Storage capacity of cooperatives on rail lines not scheduled for abandonment, on rail lines scheduled for abandonment, and not located on a rail line, by region, 1979-80[1]

Region	Not scheduled for abandonment	Scheduled for abandonment	Not on rail line	Total storage capacity[1]
	Storage capacity (bushels)			
I	160,834,242	12,188,312	23,906,527	196,929,081
II	183,056,935	1,675,850	18,114,667	202,847,452
III	647,024,498	108,452,861	166,431,477	921,908,836
IV	636,339,519	55,333,746	54,213,229	745,886,494
V	145,287,715	15,837,559	37,439,456	198,564,730
All regions	1,772,542,909	193,488,328	300,105,356	2,266,136,593

[1]Does not include data for Gold Kist, GTA (currently a portion of Harvest States), and Missouri Farmers Association.

Table 18—Regional distribution of the storage capacity of local cooperative associations on rail lines not scheduled for abandonment and on rail lines scheduled for abandonment, by rail line, 1979-80

Railroad	Not scheduled for abandonment, region					Scheduled for abandonment, region					Storage capacity [2]
	I	II	III	IV	V	I	II	III	IV	V	
	Percent										*Bushels*
Atchison, Topeka, & Santa Fe	0	0	6	93	0	0	0	1	0	0	159,864,040
Baltimore and Ohio	47	0	53	0	0	0	0	([1])	0	0	32,909,531
Burlington Northern	0	1	29	42	16	0	0	7	2	3	358,748,797
Chicago, and Northwestern	([1])	0	76	14	0	0	0	10	0	0	268,166,121
Conrail	67	0	6	0	0	16	0	11	0	0	28,872,299
Chicago Rock Island, & Pacific	0	42	8	0	0	0	0	0	50	0	20,773,030
Cotton Belt	0	100	0	0	0	0	0	0	0	0	60,536,000
Illinois Central Gulf	0	6	72	0	0	0	2	20	0	0	103,124,720
Milwaukee	0	0	67	0	0	0	0	33	0	0	52,621,445
Missouri Pacific	0	45	7	48	0	0	0	0	0	0	155,420,908
Norfolk & Western	58	0	40	0	0	2	0	0	0	0	81,034,295
Rock Island	0	0	14	0	0	0	0	32	54	0	41,546,237
Toledo, Peoria, & Western	37	0	63	0	0	0	0	0	0	0	20,594,949
Santa Fe	0	0	10	88	0	0	0	0	2	0	33,152,318
Soo Line	0	0	100	0	0	0	0	0	0	0	48,341,810
Southern Pacific	0	15	0	41	44	0	0	0	0	0	24,832,425
Union Pacific	0	0	2	64	28	0	0	0	4	2	153,671,939
Columbus, Greenville & Illinois Central Gulf	66	34	0	0	0	0	0	0	0	0	20,500,000
Other rail lines	19	9	26	28	11	2	0	1	3	1	301,320,373

[1]Less than 0.5 percent.

[2]Does not include data for Gold Kist, GTA (currently a portion of Harvest States), and MFA.

PROBLEMS FACING COOPERATIVES

When asked to list the biggest problems facing grain-handling cooperatives, many survey respondents listed several. However, no attempt was made to categorize the problems.

Cooperatives in different areas viewed problems differently. "Interest cost" was the problem mentioned most often, ranging from 12 percent of the responses from region V to 23 percent in regions I and II (table 19). It must be remembered that this was a period of escalating interest rates and was felt by all businesses. Transportation was second with 14 percent of the total response. Train-related problems followed closely with 11 percent of the total. Fifteen percent of the responses in region III indicate trains as a problem while only 2 percent of the responses in region I indicated a train-related problem. It is felt that the reason for the high rate of response to transportation and train-related problems is the fact that region III is a surplus production area that must move grain quickly. Also, during the marketing year there were many instances of railcar shortages. Much of region I is a grain deficit area eliminating the need for outbound shipping. Further, in the heavy production area in region I large amounts of grain are shipped to nearby export and processor markets by truck.

Markets in general, prices, and competition were commonly mentioned problems, making up 8, 5, and 5 percent of the total responses, respectively. In regions II and III, 10 and 11 percent of the responses indicated markets in general to be problems. The responses in other regions ranged from 4 to 8 percent. Mentioned as specific problems were reliable market information, farmers bypassing locals, irregular demand, and buying mortaged grain. Prices and competition were mentioned frequently by respondents, 5 percent of total responses for each problem. In regions II and IV prices was the second most common problem cited, ranging to a low response rate of 1 percent in region V. Competition frequently was cited as a problem in region I. This would be expected since there is a high number of noncooperative companies located in the area as well as considerable overlapping of trade territory among cooperatives.

Problems associated with members were mentioned in all of the areas. Some of the individual responses were member commitment, lack of members, nonmember business, and membership in several cooperatives. Further research is needed to determine the reasons for these problems in the cooperative community.

Table 19—Distribution of responses citing problems facing cooperative associations, total United States and by region, 1979-80

Problem	U.S. total	I	II	III	IV	V
	Percent					
Interest cost	19	23	23	20	18	12
Transportation	14	5	4	18	9	8
Train-related	11	2	4	15	6	6
Markets in general	8	7	10	11	4	8
Finance	6	1	4	4	8	24
Prices	5	2	18	3	10	1
Competition	5	10	4	4	7	0
Regulations	5	8	0	4	5	8
Rate control	4	2	0	3	5	12
Members	3	1	5	4	3	3
Other responses	20	39	28	14	25	18
Total	100	100	100	100	100	100

Appendix Tables

Appendix table 1—Volumes of types of grain, including grain bank and CCC grain, handled by local cooperative associations, by region, 1979-80

Type	I	II	III	IV	V	Total
			Bushels			
Corn	357,513,646	29,587,075	1,247,421,124	250,054,139	3,938,415	1,888,514,399
Wheat	65,307,018	23,236,274	425,382,333	432,936,591	160,789,557	1,107,651,773
Soybeans	132,828,503	235,777,355	356,786,543	33,123,998	0	758,516,399
Grain sorghum	92,564	1,236,171	19,809,722	204,821,295	206,681	226,166,433
Oats	11,892,005	2,288,345	102,701,908	6,429,157	1,154,063	124,465,478
Barley	2,575,020	177,000	124,380,498	2,005,705	36,910,395	166,048,618
Rye	14,567	0	7,247,651	6,722	0	7,268,940
Flax	0	0	7,478,227	0	0	7,478,227
Dry beans	6,741,645	0	0	753,053	2,258,810	9,753,508
Dry peas	0	0	0	0	3,605,172	3,605,172
Sunflower	0	0	76,361,242	112	46,075	76,407,429
Buckwheat	33,333	0	119,469	0	0	152,802
Millet	0	0	1,508,817	518,285	0	2,027,102
Mustard	0	0	3,178	0	0	3,178
Rape	0	0	5,488	0	8,739	14,227
Triticale	0	0	134,980	0	859	135,839
Safflower	0	0	0	0	133,234	133,234
Lentil	0	0	0	0	396,243	396,243

Appendix Table 2—Distribution by market outlet of grain sold by local cooperative associations, by type of grain, 1979-80

Type	Grain sold			
	Locally	Cooperatives	Noncooperatives	Total
		Percent		
Corn	15	50	35	100
Wheat	2	68	30	100
Soybeans	1	69	30	100
Grain sorghum	27	49	24	100
Oats	49	33	18	100
Barley	6	63	31	100
Rye	29	44	27	100
Flax	([1])	55	45	100
Rice	0	90	10	100
Dry beans	1	25	74	100
Dry peas	1	2	97	100
Sunflower	3	66	31	100
Buckwheat	1	1	98	100
Millet	1	13	86	100
Mustard	0	75	25	100
Rape	0	29	71	100
Triticale	0	41	59	100
Safflower	0	0	100	100
Lentils	0	20	80	100
All grains	9	60	31	100

[1]Less than 0.5 percent.

Appendix table 3—Disposition of grain sold by cooperatives, by market outlet and type of grain, 1979-80

Type	Grain sold: Locally	Cooperative	Noncooperative	Total
	Bushels			
Corn	251,955,891	873,533,590	616,583,211	1,742,072,692
Wheat	24,445,256	715,509,072	313,259,905	1,053,214,233
Soybeans	5,632,145	525,271,752	223,687,760	754,591,657
Grain sorghum	57,501,452	104,068,305	50,067,533	211,637,290
Oats	56,432,107	38,882,447	21,369,980	116,684,534
Barley	10,588,782	104,065,382	50,996,550	165,650,714
Rye	2,130,518	3,207,809	1,930,613	7,268,940
Flax	21,407	4,120,422	3,336,398	7,478,227
Rice	0	179,303,814	20,037,935	199,341,749
Dry beans	72,932	2,487,260	7,193,316	9,753,508
Dry peas	34,978	60,000	3,510,194	3,605,172
Sunflower	1,977,747	50,531,935	23,897,747	76,407,429
Buckwheat	1,751	1,470	149,581	152,802
Millet	21,905	271,075	1,734,122	2,027,102
Rape	0	4,116	10,111	14,227
Triticale	0	55,899	79,940	135,839
Safflower	0	0	133,234	133,234
Lentils	0	77,281	318,962	396,243
Total	410,816,871	2,601,454,012	1,338,297,887	4,350,568,770

Appendix table 4—Regional disposition of grain sold by local cooperative associations, by type of market, 1979-80

Region	Grain sold: Locally	Cooperatives	Noncooperatives
	Percent		
I	8	11	16
II	1	12	5
III	57	48	56
IV	33	24	14
V	1	5	9
All regions	100	100	100

Appendix table 5—Mode of grain transportation, by region, 1979-80

Region	Mode of transportation				
	Truck	Rail	Barge	Other	Total
	Bushels				
I	399,448,808	131,444,571	8,158,528	157,496	539,209,403
II	125,109,000	196,731,096	45,617,311	0	367,457,407
III	1,249,537,473	989,693,566	89,865	261,362	2,239,582,266
IV	493,637,385	447,004,757	0	937,629	941,579,771
V	55,405,529	102,033,968	90,286,584	15,013,842	262,739,923
Total	2,323,138,195	1,866,907,958	144,152,288	16,370,329	4,350,568,770

Appendix table 6—Volume of grain shipped by rail by local cooperative, by size of shipments and region, 1979-80

Region	Associations	Rail volume	Size of shipment						
			Single car	2-24 cars	25-49 cars	50-74 cars	75-99 cars	100-124 cars	over 125 cars
		Bushels							
I	129	131,444,571	12,195,831	72,338,430	0	14,990,558	4,218,981	27,700,771	0
II	22	196,731,096	145,719,380	50,915,628	96,088	0	0	0	0
III	794	989,693,566	390,677,724	215,968,164	129,637,217	68,578,315	138,580,497	42,640,634	3,611,015
IV	506	447,004,757	136,229,156	180,106,611	74,846,448	55,050,153	772,389	0	0
V	73	102,033,968	74,321,854	23,454,424	3,884,356	373,334	0	0	0
Total	1,523	1,866,907,958	759,143,945	542,783,257	208,464,109	138,992,360	143,571,867	70,341,405	3,611,015

U.S. Department of Agriculture
Agricultural Cooperative Service

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

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